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Acute Myocardial Infarction Caused by Suicidal Hanging Attempt: An Unusual Scenario

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Abstract

Suicide is an important cause of mortality among adults. Suicidal hanging attempts are associated with various adverse cardiovascular outcomes. Acute MI following suicidal hanging is very rare. We herein present a case of acute myocardial infarction (MI) due to attempted hanging suicide.

Keywords:

acute myocardial infarction; suicidal hanging attempt; reperfusion therapy.

Introduction

Suicide is an important cause of mortality among adults. Suicidal attempts are associated with significant morbidity, especially neurological deficits, cardiac arrest, and cardiovascular complications. We herein present a case of acute myocardial infarction (MI) due to attempted hanging suicide.

Case Presentation

This 47-year-old gentleman presented with complaints of alleged history of hanging and was admitted under Neurology for management. His arterial blood pressure was 128/80, and heart rate was 92 bpm with an arterial oxygen saturation of 99%. His neurological examination was completely normal. Brain computerized tomography and diffusion magnetic resonance imaging also didn't demonstrate any defects. While in ward, he had a typical chest pain suggestive of coronary ischemia. His cardiac enzymes were significantly elevated. ECG done showed ST elevation in anterior precordial leads. (Fig 1) His Echocardiogram showed LV Systolic Dysfunction with hypokinesia in mid anteroseptum, apical septum, apex, apical lateral, apical anterior and apical inferior segments. There was no history of dyspnoea on exertion, palpitations or syncope anytime in past or during current admission. There was no history of acute coronary syndrome or cerebrovascular accident in the past. There was history of diabetes mellitus for 2 years, there was history of systemic hypertension for 2 years, he denies addictions. He is a known patient with depressive disorder last 1 year under antidepressant medications for the same.

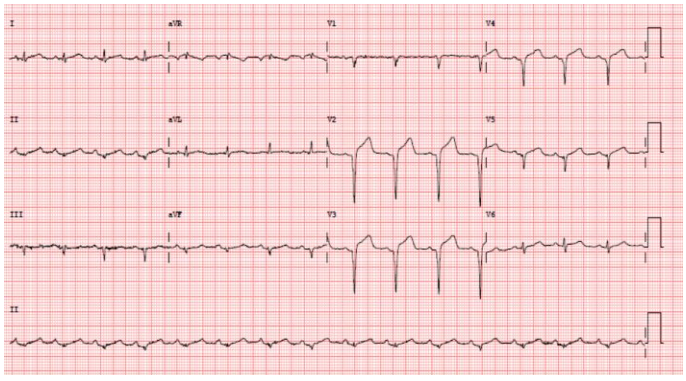

Fig 1: Electrocardiogram demonstrating Anterior Wall ST-Elevation Myocardial Infarction.

He underwent primary PTCA for the same. Coronary angiogram showed double vessel coronary artery disease; acute thrombotic LAD Lesion (culprit vessel). (Fig 2) PTCA with stenting of the LAD was done with DES with good result, with TIMI III flow in the distal arterial bed. (Fig 3)

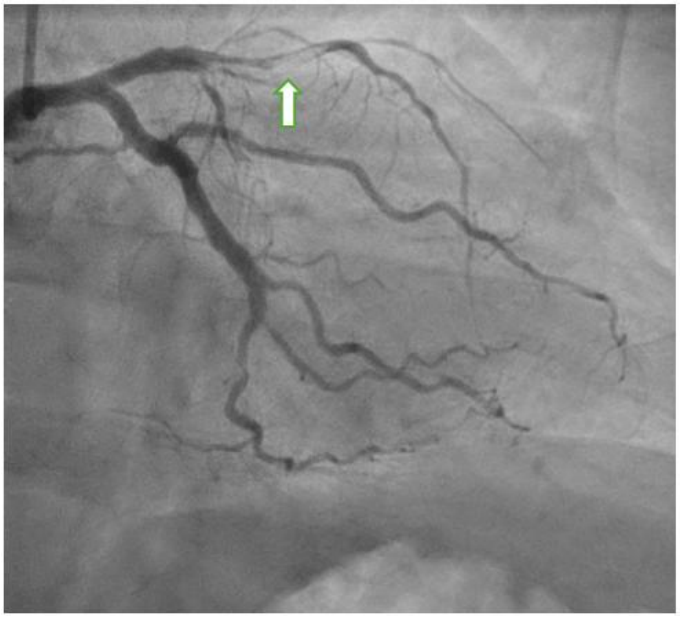

Fig 2: CAG showing Proximal to mid LAD long segment thrombotic lesion of maximum 90% severity with distal TIMI II flow.

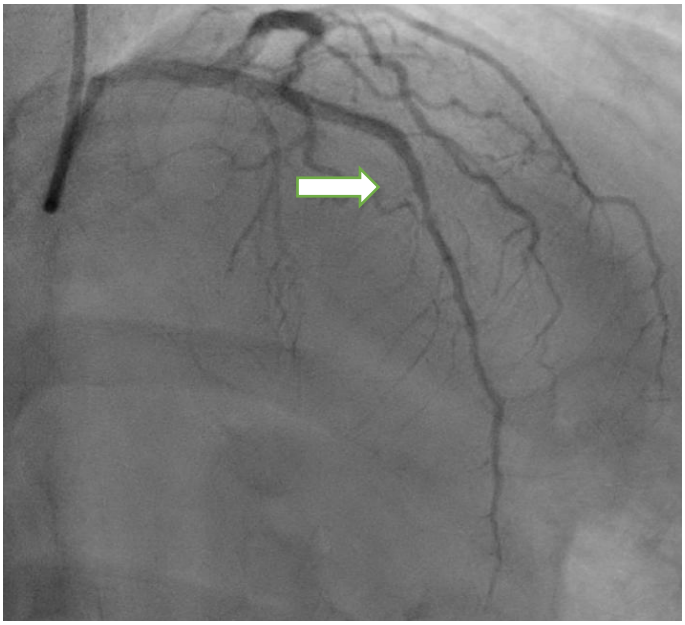

Fig 3: Post PTCA with TIMI III flow in the distal arterial bed.

Post procedure hospital stay was uneventful. Psychiatry consultation was taken for major depressive disorder. He and his family members were counselled regarding precautions that need to be taken to prevent further episodes. He was ambulated in the ward which he tolerated well. His medications were optimised, and he was discharged in a hemodynamically stable condition

Discussion

Suicidal hanging attempts are associated with various adverse cardiovascular outcomes, such as carotid artery dissection and/or occlusion,(1,2) heart block, (3)ventricular tachycardia/fibrillation, (4)and stress cardiomyopathy (i.e. Takotsubo syndrome).(5–7)

Acute MI following suicidal hanging has been reported only once before.(8) Transient hypoxemia brought on by breathing cessation may result in contemporaneous type 2 MI via hypoxemia even without significant atherosclerotic cardiovascular disease. On the other hand, oxidative stress brought on by hypoxemia-reperfusion can result in the production of proinflammatory cytokines and may produce type 1 MI.

Reperfusion therapy assumes a consistent class I LoE A recommendation according to both ESC and ACCF/AHA guideline among STEMI patients with symptom duration <12 hours. (9) Regarding patients with STEMI presenting more than 12 hours after symptom onset with evidence of ongoing ischaemia, the ESC guidelines recommend reperfusion therapy with class I LoE C whereas the ACCF/AHA guidelines provide a class IIa LoE B. In addition, the ESC guidelines –but not the ACCF/AHA guidelines– consider reperfusion therapy (class IIb, LoE B) for patients presenting 12-24 hours after symptoms onset irrespective of ongoing evidence of ischaemia.(9)

Our patient underwent a timely reperfusion therapy and had a very favourable outcome.

Conclusion

Acute Myocardial Infarction caused by suicidal hanging attempt is an unusual presentation. The patients should be carefully investigated for cardiovascular complications. A high index of suspicion for Acute Myocardial Infarction must be present for patients who is admitted suicidal hanging attempt complaining of acute chest pain. Reperfusion therapy is the key in patients with STEMI.

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